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Appln. No. 10/721,658
Filed: November 25, 2003
Reply to Office action mailed March 22, 2007
Response filed June 22, 2007

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REMARKS

Claims 1-21 are pending in the Application and all have been rejected in the Office action mailed March 22, 2007. Claims 1, 3, 4, 6, 7, 17, and 18 are amended by this response. Claims 1, 6, and 17 are independent claims. Claims 2-5, 7-16, and 18-21 depend, respectively, from independent claims 1, 6, and 17, respectively.

The Applicants respectfully request reconsideration of the pending claims 1-21, in light of the following remarks.

Amendments to the Claims

Claim 1 has been amended to remove the limitation "selectively", and to clarify the subject matter of the claim. Applicants respectfully submit that these amendments do not add new matter.

Claims 3, 4, 6, 7, 17, and 18 have been amended to more clearly describe the claimed subject matter. Applicants respectfully submit that support for these amendments may be found, for example, in PCT application having publication number WO/02/41147 A1, and having application number PCT/US01/44034, filed on November 19, 2001, or in U.S. Provisional Application 60/415,620, filed October 02, 2002, the subject matter of each of which was incorporated in the Application, in its entirety, at the time of filing of the Application, at paragraph [0041] on page 9 of the Application, and at paragraph [0036] on page 8 of the Application. Applicants respectfully submit that "optimum" may be defined as the "...greatest degree attained or attainable under implied or specified conditions...." (see, e.g., Merriam-Webster's Collegiate Dictionary, Tenth Edition, Copyright 2002, page 815). Applicants respectfully submit that these amendments do not add new matter.

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Rejections of Claims

Rejections Under 35 U.S.C. §101

Claims 1-5 were rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. Applicants respectfully traverse the rejection. Nevertheless, Applicants have amended claim 1 in an effort to more clearly describe the subject matter of the claim. Applicants believe that claims 1-5 are directed to statutory subject matter, and respectfully request that the rejection of claims 1-5 under 35 U.S.C. §101 be withdrawn.

Rejections Under 35 U.S.C. §112

Claims 1-3, 5, 7-16, and 18 were rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. Applicants respectfully traverse the rejection.

The Applicants respectfully submit that the Office action has failed to establish a *prima facie* case of lack of enablement. The Office action alleges, at page 3, that the specification provides no further detail than identifying the terms "differential evolution", "genetic computation", "genomes", "population of genomes", "adding seeds to the population", "mutated genomes", "elite genomes", and "mated genomes". The Office action states, at page 3, that "[t]here are no definitions as to how the biotech related terms are to be defined, and interpreted within the scope of the invention, thus lacking enablement to one of ordinary skill in the art." Applicants respectfully disagree. Applicants respectfully submit that Applicants' disclosure teaches, for example, at paragraph [0036} that, "...[t]o make the update package compact, as well as efficient, an optimum bank order may be determined employing at least one genetic evolution technique, which may also sometimes be referred to as differential evolution techniques. Other parameters employed in the generator may also be optimized using at least one genetic evolution technique...." The reader of Applicants' disclosure has, therefore, been enlightened to the innovative use of "genetic evolution", also known as "differential evolution", in optimizing bank order for an update of a binary image for an electronic device. Applicants respectfully submit that the term "differential evolution",

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and techniques for performing "differential evolution" are well known by those of ordinary skill in the art in the fields of optimization, and genetic and evolutionary algorithms, and are not "biotech related terms". Even a cursory search of available Internet sources using the "Google" search engine results in 140,000 hits on the search term "differential evolution". Applicants also respectfully submit that the meanings of the terms "genomes", "population of genomes", "adding seeds to the population", "mutated genomes", "elite genomes", and "mated genomes" would be immediately and unquestioningly recognizable by one of ordinary skill in the art when considered in light of the teachings of Applicants' disclosure. Applicants respectfully submit that the Application need not provide the reader with an explanation of terms and techniques that are well known to those of ordinary skill in the art. Based at least upon the above, Applicants respectfully submit that the Office action has failed to set forth a *prima facie* case of lack of enablement. Applicants respectfully request, therefore, that the rejection of claims 1-3, 5, 7-16, and 18 under 35 U.S.C. §112, first paragraph, be withdrawn.

Claims 19 and 20 were rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. Applicants respectfully traverse the rejection.

The Office action states, at page 4, that "...claims 19(lines 2) and 20 (line 2) are directed to "verification information" and "authentication," respectively. There is no support for these limitations found in the specification." Applicants respectfully disagree. Applicants respectfully submit that support for use of the terms "verification information" and "authentication" may be found, for example, in PCT application having publication number WO/02/41147 A1 designating the United States, and having application number PCT/US01/44034, filed on November 19, 2001, the subject matter of which was incorporated in the Application, in its entirety, at the time of filing of the Application. (See page 1) Support for the limitations "verification information" and "authentication" is provided, for example, in FIGs. 11 and 12, and at page 58, line 8 through page 60, line 11 of the above-identified PCT Application. Therefore, Applicants respectfully submit that support for the terms "verification information" and

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"authentication" is present in the Application, that the Application is in compliance with 35 U.S.C. §112, second paragraph, and respectfully request that the rejection of claims 19 and 20 under 35 U.S.C. §112, second paragraph, be withdrawn.

Claims 1, 3, 4, 6, 7, and 17 were rejected under 35 U.S.C. §112, second paragraph, as the claims were deemed unclear as to the claimed subject matter. Applicants respectfully traverse the rejection. Nevertheless, Applicants have amended claims 1, 3, 4, 6, 7 and 17 as shown above. Applicants believe that amended claims 1, 3, 4, 6, 7, and 17 comply with 35 U.S.C. §112, second paragraph. Therefore, Applicants respectfully request that the rejection of claims 1, 3, 4, 6, 7, and 17 under 35 U.S.C. §112, second paragraph, be withdrawn.

Rejections Under 35 U.S.C. §102

Claims 1-4, 6, 17-19, and 21 were rejected under 35 U.S.C. §102, as being anticipated by Yang (US 2004/0040020) Applicants respectfully traverse the rejection.

With regard to the anticipation rejections, MPEP 2131 states, "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). MPEP 2131 also states, "[t]he identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

With regard to amended claim 1, Applicants respectfully submit that Yang does not appear to teach or suggest each and every element of Applicants' amended claim 1, which recites "...[a] system for generating difference information between a first binary image of an electronic device and a second binary image of the electronic device, the system comprising a bank order determination unit adapted to employ at least one differential evolution technique to determine a bank order of updating electronic device memory comprising a plurality of banks; and wherein the determined bank order and the

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difference information are transmitted to and processed by the electronic device to update memory in the electronic device."

The Office action states that the term "differential evolution technique" is interpreted as "...being a generic term applied to the different types of techniques which can determine a bank order." (Office action at page 6) Applicants respectfully disagree with this interpretation, and note that no basis or reasoning for such an interpretation is set forth in the Office action. As discussed above, the meaning of the term "differential evolution" is well known to those of ordinary skill in the relevant art, and is not "a generic term applied to the different types of techniques which can determine a bank order...", as stated in the Office action. Applicants respectfully submit that Yang does not appear to teach or suggest anything with respect to the use of "differential evolution techniques", let alone the use of such techniques for determining bank order. Therefore, Applicants respectfully submit that the Yang reference does not appear to teach or suggest every element of Applicants' claim 1, as required by M.P.E.P. §2131, and that a rejection of claim 1 under 35 U.S.C. §102(e) cannot be maintained.

Therefore, Applicants believe that amended independent claim 1 is allowable over Yang, for at least the reasons set forth above. Applicants respectfully submit that claims 2-5 are dependent claims that depend from independent claim 1. Because claims 2-5 depend from allowable independent claim 1, Applicants respectfully submit that claims 2-5 are also allowable, for at least the reasons set forth above. Applicants respectfully request that the rejection of claims 1-4 under 35 U.S.C. §102(e) be withdrawn.

With regard to amended claim 6, Applicants respectfully submit that the Yang reference does not appear to teach or suggest each and every limitation of Applicants' amended claim 6, which recites "[a] method for generating an update package comprising difference information for updating at least one of firmware and software in memory of an electronic device, the memory comprising a plurality of banks, the method comprising determining a bank order for processing images of the memory during

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generation of difference information, using at least one differential evolution technique; and employing the bank order to generate the update package."

Applicants respectfully submit that Yang does not appear to teach or suggest anything with respect to the use of "differential evolution techniques", let alone "...determining a bank order for processing images of the memory during generation of difference information, using at least one differential evolution technique...", as recited in Applicants' amended claim 6. Therefore, Applicants respectfully submit that the Yang reference does not appear to teach or suggest each and every element of Applicants' claim 6, as required by M.P.E.P. §2131, and that a rejection of claim 6 under 35 U.S.C. §102(e) cannot be maintained

Therefore, Applicants believe that amended independent claim 6 is allowable over Yang, for at least the reasons set forth above. Applicants respectfully submit that claims 7-16 are dependent claims that depend from independent claim 6. Because claims 7-16 depend from allowable independent claim 6, Applicants respectfully submit that claims 7-16 are also allowable, for at least the reasons set forth above. Applicants respectfully request that the rejection of claim 6 under 35 U.S.C. §102(e) be withdrawn.

With regard to amended claim 17, Applicants respectfully submit that the Yang reference does not appear to teach or suggest each and every limitation of Applicants' amended claim 17, which recites "[a] method of generating an update package for updating at least one of firmware and/or software in a mobile handset, the method comprising determining a bank order for updating the at least one of firmware and software in a bank-by-bank fashion, employing at least one genetic evolution technique; determining values of parameters used for controlling generation of the update package; and generating the update package, the update package incorporating the bank order."

Applicants respectfully submit that Yang does not appear to teach or suggest anything with respect to the use of "genetic evolution techniques", let alone "...determining a bank order for updating the at least one of firmware and software in a bank-by-bank fashion, employing at least one genetic evolution technique...", as recited

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in Applicants' amended claim 17. Therefore, Applicants respectfully submit that the Yang reference does not appear to teach or suggest every element of Applicants' claim 17, as required by M.P.E.P. §2131, and that a rejection of claim 17 under 35 U.S.C. §102(e) cannot be maintained

Therefore, Applicants believe that amended independent claim 17 is allowable over Yang, for at least the reasons set forth above. Applicants respectfully submit that claims 18-21 are dependent claims that depend from independent claim 17. Because claims 18-21 depend from allowable independent claim 17, Applicants respectfully submit that claims 18-21 are also allowable, for at least the reasons set forth above. Therefore, Applicants respectfully request that the rejection of claims 17-19 and 21 under 35 U.S.C. §102(e) be withdrawn.

Rejections Under 35 U.S.C. §103

Claim 20 was rejected under 35 U.S.C. §103(a) as being unpatentable over Yang in view of Waldin et al. (US 6,651,249, hereinafter "Waldin"). Applicants respectfully traverse the rejection.

The Applicant respectfully submits that the Examiner has failed to establish a case of *prima facie* obviousness for at least the reasons provided below. M.P.E.P. §2142 clearly states that "[t]he examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness." The M.P.E.P. §2142 goes on to state that "[t]o establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure."

Applicants respectfully submit that, in accordance with 35 U.S.C. 103(c), Yang is not a valid reference in the rejection of claim 20 under 35 U.S.C. 103(a), because the present application and Yang (U.S. Patent Application Ser. No.

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10/635,991 which published as U.S. Patent Application Publication No. US 2004/0040020 A1) were, at the time the invention was made, owned by, or under a common obligation to assign ownership to, Bitfone Corporation, now a wholly-owned subsidiary of Hewlett-Packard Development Corporation, LLC.

In addition, Applicants respectfully submit that claim 20 depends from allowable independent claim 17, and is therefore allowable over Yang, for at least the reasons set forth above with respect to claim 17.

Based at least upon the above, Applicant respectfully submits that the Office has failed to establish a prima facie case of obviousness, as required by M.P.E.P. §2142, and that the above rejection of claim 20 under 35 U.S.C. §103(a) cannot stand.

Applicants believe, therefore, that claim 20 is allowable, for at least the reasons set forth above, and respectfully request that the rejection of claim 20 under 35 U.S.C. §103(a), be withdrawn.

Conclusion

In general, the Office action makes various statements regarding claims 1-21 and the cited reference that are now moot in light of the above. Thus, Applicants will not address such statements at the present time. However, Applicants expressly reserve the right to challenge such statements in the future should the need arise (e.g., if such statements should become relevant by appearing in a rejection of any current or future claim).

The Applicants believe that all of pending claims 1-21 are in condition for allowance. Should the Examiner disagree or have any questions regarding this submission, the Applicants invite the Examiner to telephone the undersigned at (312) 775-8000.

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A Notice of Allowability is courteously solicited.

Respectfully submitted,

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